

PHASE 1 RJM BURNER EVALUATION

The Burner Design Evaluation will consist of the following:

1. Conduct Mechanical Design Evaluation \$27,000
  - a. Develop CAD model of burner
  - b. Conduct finite element analysis

Objective: • Minimize thermal expansion related damage to the burners.

2. Conduct 2-dimensional axisymmetric air flow model \$9,000

Objectives: • Establish proper swirl characteristics.  
• Determine outer register, inner register and backplate position settings to meet air flow requirements.

3. Design Coal Flame Stabilizer \$7,200

Objectives: • Determine flame stabilizer design requirements and incorporate into mechanical design evaluation, air flow model and NOx evaluation.

4. Conduct NOx emissions evaluation \$1,000

Objectives: • Conduct NOx combustion evaluation to ensure recommendations on modifications to the burners do not increase NOx emission levels.

ESTIMATED COSTS for burner design evaluations \$44,200  
plus travel for meetings requested by IPSC \$ 2,000

TOTAL \$46,200